

REMARKS

Claims 15-16, 18-22 and 26-31 are amended; claims 17 and 24 are cancelled; claim 32 is added. Claims 15-16, 18-23 and 25-32 are pending, of which claims 15, 29 and 32 are independent claims.

Submitted herewith is a statement signed by Mr. Patrice Petiteaux on July 15, 2011. Mr. Petiteaux is President of a Professional Organization of the Bread and Pastry Shop of Aisne which is affiliated with the National Confederation of French Bakery. The statement sets forth certain facts regarding comparative testing that are pertinent to the issue of patentability in this matter. Information from Mr. Petiteaux's statement is included in the remarks for patentability presented below. The statement is in the French language and accompanied by an English translation, along with a copy of Mr. Petiteaux's identity card.

In the Office Action, all the claims of this application are rejected based primarily on the combination of Schirico (US 4,806,736) and Von Arx (US 6,519,835), with further reliance on Macy (US 2,021,458), Forrester (US 6,281,477) and/or Kochman (US 6,563,094) for various dependent claims. These rejections are all respectfully traversed.

Claim 15 recites a heater bag for bakery products made using a flour-based dough, except products including food not fully incorporated in the dough including tarts and pizzas. The heater bag is configured and operative to warm the bakery products until a temperature between 36° C and 44° C starting from a lower ambient temperature while fully conserving the quality and the integrity of these products and simultaneously improving their flavour. The heater bag has a flexible or semi-rigid casing defining a bottom, side walls; an opening, and means for selectively closing the opening. The heater bag also includes first and second semi-flexible heater plates each having an electrical heater element incorporated therein and being inserted in pockets of natural material comprising cotton, flax, and wool that constitute a portion of the bottom, of the side walls, or of the means for closing the heater bag. For each of the semi-flexible heater plates, the heating power per cm² lies in the range of 0.13 W to 0.24 W.

The heater bag may be used to regenerate a bakery product being at room temperature (such as stale bread) to restore its flavor (i.e. in particular make it warmer, softer and more crunchy) in order to fully recover the quality and integrity of a freshly baked product, in a way which is practical, safe, economical, lightweight and in particular affordable for any housemaker in a domestic environment. The subject bakery products exclude any products that include food not fully incorporated in the dough, such as tarts and pizzas. As explained more fully below, the prior art cited in the Office Action is not directed to the same use or application and does not suggest any means of achieving these advantageous results in any way which could be compared with the subject matter of the present invention.

Schirico discloses a portable container usable for delivery of hot pizzas which includes a fabric box supported in its four vertical corners by plexiglass strips positioned inside sleeves. A lower rigid panel located at the bottom of the fabric box is used to support a heating unit. An upper rigid panel located above the heating unit forms a compartment with the sides and top of the fabric box large enough to contain two pizzas in their delivery box containers. The heating unit includes an aluminum pan which contains a block of insulation having a one-half inch depression in its upper surface. A silicon rubber heating element is positioned inside this depression. The temperature inside the portable container is maintained between 165 -180 F. The portable container can be carried with one hand when used for delivery of hot pizzas (Abstract).

It is emphasized that the container of Schirico is used only to maintain a high temperature of a cooked pizza, not to warm up bakery products from room temperature so as to restore their quality. While it is acknowledged that intended use will generally not impart novelty over a single prior-art reference showing the same apparatus used for a different purpose, use or functionality is certainly relevant to any question of obviousness over a combination of prior art references. The relevance of the use and functionality of the heater bag of claim 1 is discussed below.

As noted in the Office Action, Schirico does not disclose that the heating power of a heater plate lies in the range of 0.13 W to 0.24 W per cm². Schirico teaches a heating power of 3 W per in², or 0.46 W per cm².

As also noted in the Office Action, Schirico does not disclose that the heating elements are disclosed in pockets of natural material comprising cotton, flax and wool. In Schirico, the heating elements are positioned in a slight depression on an upper surface of a layer of fiberglass insulation arranged in an aluminum tray at the bottom of the fabric box.

Von Arx discloses a semi-rigid heated element assembly and method of manufacturing semi-rigid heated element assemblies. A heated element assembly includes a first thermoplastic sheet, a second thermoplastic sheet, and a resistance heating element laminated between the first and second thermoplastic sheets. The resistance heating element includes a supporting substrate having a first surface thereon and an electrical resistance heating material forming a predetermined circuit path having a pair of terminal end portions. The circuit path continues onto at least one flap portion that is capable of rotating about a first axis of rotation. The reformable continuous element structure may be formed into a final element assembly configuration whereby at least the flap portion is rotated along its axis of rotation to provide resistance heating in at least two planes. Semi-rigid heating elements may be formed into heated containers, heated bags, and other objects with complex heat planes (Abstract).

In Von Arx, "supporting substrate" refers to the base material on which the resistance material, such as wires, are applied. The supporting substrate should be capable of being pierced, penetrated, or surrounded, by a sewing needle for permitting the sewing operation. Flat flexible substrates are preferably used for attaching an electrical resistance wire with a thread. Non-plastic materials, such as glasses, semiconductive materials, and metals, can be employed so long as they have a piercable cross-sectional thickness, e.g., less than 10-20 mil, or a high degree of porosity or openings therethrough, such as a grid, scrim, woven or

nonwoven fabric, for permitting the sewing needle of this invention to form an adequate stitch. The supporting substrate 11 of this invention need not necessarily contribute to the mechanical properties of the final heating element, but may contain high strength fibers. Such fibers could contain carbon, glass, aramid fibers melt-bonded or joined with an adhesive to form a woven or non-woven mat. Alternatively, the supporting substrate 11 of this invention may contain ordinary, natural, or synthetic fibers, such as cotton, wool, silk, rayon, nylon, polyester, polypropylene, polyethylene, etc. The supporting substrate may also comprise a synthetic fiber such as Kevlar or carbon fibers that have good thermal uniformity and strength. The advantage of using ordinary textile fibers, is that they are available in many thicknesses and textures and can provide an infinite variety of chemistry, porosity and melt-bonding ability. The fibers of this invention, whether they be plastic, natural, ceramic or metal, can be woven, or spun-bonded to produce non-woven textile fabrics (cols. 5-6).

It is emphasized that Von Arx's teaching with respect to the use of ordinary textile fibers is limited to their thicknesses, textures, chemistry, porosity and melt-bonding ability. Further, the desired "porosity" is that which permits a sewing needle to form an adequate stitch. There is no teaching in Von Arx regarding selection of a substrate material for a purpose such as controlling moisture in a heating bag. In fact, Von Arx specifically teaches the use of his invention for heated bags (cols. 10-11), but nowhere expresses any concerns regarding moisture or any use of "ordinary textile fibers" for controlling it.

The combination of Schirico and Von Arx cannot render claim 15 obvious, because it does not teach or suggest all the elements thereof. In particular, this combination of references does not include heater plates being inserted in pockets of natural material comprising cotton, flax, and wool that constitute a portion of the bottom, of the side walls, or of the means for closing the heater bag. In Schirico, the heating elements are included in shallow depressions of fiberglass insulation. In Von Arx, the substrate 12 on which the heating wires 14 are formed are not "pockets", but rather simply planar substrates. Furthermore,

one of ordinary skill in the art would hardly substitute an "ordinary textile fiber" of Von Arx for the fiberglass insulation of Schirico, as it would destroy the desired effect of enabling the container to be carried with one hand when used for delivery of hot pizzas. In Schirico, the internal temperature is maintained between 165 -180 F, and the heating element is presumably much hotter. Schirico specifically teaches that the heating element is surrounded by fiberglass insulation on all sides except its internal-facing top surface, so that the material of the bag is prevented from coming into contact with the heating element (cols. 1-2). In Schirico, the fiberglass insulation is essential to keeping the surface temperature of the container sufficiently low to enable it to be carried in the desirable one-handed manner. This purpose would not be served by an ordinary textile fabric. Thus, contrary to the assertions in the Office Action, the combination of Schirico and Von Arx does not disclose a heating bag having a heating element inserted into a pocket of natural material comprising cotton, flax, and wool that constitute a portion of the bottom, of the side walls, or of the means for closing the heater bag.

The combination of Schirico and Von Arx also does not disclose that a heater plate has a heating power in the range of 0.13 W to 0.24 W per cm². Schirico discloses a heating power of 3 W per in² to keep a pizza piping hot. Von Arx is not seen to specifically discuss heating power at all, nor any specific heating power in the range of 0.13 W to 0.24 W per cm². The Office Action attempts to overcome these shortcomings by (1) asserting that an appropriate heating power would be obvious based partly on "desired target temperature and rising time", and (2) referring to the disclosed use of two heater plates which are alleged to somehow provide twice the area-normalized heating power. Regarding the first assertion, any alleged obviousness must be measured against some purpose or goal, and the only goal in Schirico is to maintain a cooked pizza at a very high temperature. Schirico plainly teaches that a much higher heating power is needed for such a purpose. The reference to "rising time" in this assertion is not understood, as neither Schirico nor the claimed invention is directed to

proofing an uncooked dough. Regarding the second assertion, claim 15 specifies heating power in an area-normalized manner, and thus it does not matter if there are two or two hundred plates - the heating power is in the range of 0.13 W to 0.24 W per cm². It is simply wrong to double an area-normalized heating power because there are two heater plates. Thus, the combination of Schirico and Von Arx does not teach this second aspect of claim 15.

Based on the foregoing, the combination of Schirico and Von Arx cannot render claim 15 obvious because it fails to teach all the elements of claim 15.

It is also desired to present additional reasons why claim 15 is not obvious based on the combination of Schirico and Von Arx.

Broadly, Schirico relates to a device which has a purpose different than the present invention: maintaining the temperature or slowing down the temperature decline of a cooked pizza, rather than regenerating a bakery product by warming it from an ambient temperature to a higher temperature in a controlled humid atmosphere (partly provided by the use of natural materials in the heating bag). The container of Schirico cannot be used for this purpose while provide a sufficiently desirable result.

It is believed that pizza containers available on the market cannot be safely and successfully used for the specific purpose of regenerating bakery products such as a loaf of bread, whereas the heater bag according to the present invention provides quite remarkable results and has already been launched successfully on the French market without being deemed equivalent to any previously known portable container for pizzas. The specific power density range mentioned in claims 15 and 29 results from long research made by the inventor and is not obvious for the person or ordinary skill in the art, who will have completely different power density range proposals in the field of pizza boxes based on the teaching of prior art documents such as Schirico or Forrester.

The inventor has found that the choice of a power density of a heater plate between 0.13 W and 0.24 W, in combination with the other features recited in the

independent claims, is essential to achieve the aims of the present invention and in particular the required regeneration of the bakery product. Trying to use either lower or greater power densities will not permit to obtain the required result with a reasonable duration of a few minutes.

As mentioned in the description on page 7, lines 2 to 11, according to the invention, an optimum warming temperature of about 36°C to 44°C is obtained for the food with a mean value of about 40°C, "such that the warmed bread retains all its flavor and is neither too hard nor too dry and does not become stale even on returning to ambient temperature. The particular power densities selected for the heater plates 121 and 122 guarantee that water present in the bread is not completely eliminated, in contrast to toast or bread that has been placed in a microwave oven."

Furthermore it is submitted that the use of Plexiglas, aluminum and a block of fiberglass as shown in Schirico is unsuitable for controlling the evaporation of water as required in the heater bag according to the invention. According to Schirico the moisture is not captured by materials of the walls of the container. The moisture present in the container is simply evacuated through two grommets 54, thus rendering the device improper for achieving the aims of the present invention - a warmed loaf of stale bread will not become soft and crunchy if the water escapes from the container and is not retained in a natural material such as cotton, flax and wool.

Moreover, in the configuration of Schirico, the heating element 32 is remote from the outer walls whereas the heater bag according to the invention comprises a flexible or semi rigid casing and the first and second semi-flexible heater plates are directly inserted in pockets of natural material (or according to claim 29 have at least an outer surface contacting an outer lining made of natural material), the pocket of natural material or the outer lining constituting directly a portion of the bottom, of the side walls or of the means for closing the heater bag. The nature of the natural material (cotton, flax or wool) and the power density of the heater plate (0.13 W to 0.24 W) enable a safe operation even in a household

and are specifically chosen for the particular purpose of regenerating bakery products, which is different from keeping a pizza piping hot.

For purposes of demonstrating the importance of the differences between Schirico and the claimed invention, the inventor Mr. Saadoun has conducted on July 15, 2011 comparative tests in the presence of the above-mentioned Mr. Petiteaux. Tests were conducted on the one hand on a pizza heating bag available in Europe (which may be deemed to correspond to the family of products such as defined by Schirico or Forrester) and on the other hand on a bread heating bag as defined in the present application reference (Petiteaux statement, ¶1). The same type and quantity of bread was inserted in a pizza heating bag and in a bread heating bag (Id., ¶2). Whereas bread was hot and crusty when taken out of the bread heating bag at the end of a first period of 13 minutes, the bread taken out of the pizza heating bag was a mere soft and lukewarm thing (Id., ¶3). Even after another additional period of 13 minutes within the pizza heating bag, the bread quality did not improve and was not comparable to the bread taken out of the bread heating bag after a single period of 13 minutes (Id., ¶4). It is summarized that the bread bag returns the essential qualities to the bread, whereas the pizza bag does not do so (Id., ¶5).

It is respectfully submitted that the above evidence further supports the conclusion that the independent claims of this application are not obvious based on a heated pizza delivery bag as taught in Schirico, either alone or in combination with Von Aux.

Based on all the above, it is believed that all the claims of this application are non-obvious and therefore patentable over the art of record including Schirico and Von Arx. Favorable action is respectfully requested.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case. If there is a fee occasioned by this response, including an extension fee, please charge any deficiency to Deposit Account No. 50-3661.

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If the enclosed papers or fees are considered incomplete, the Patent Office is respectfully requested to contact the undersigned collect at (508) 616-2900, in Westborough, Massachusetts.

Respectfully submitted,

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